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09/14/15205
10/12/99

A

October 12, 1999

BOX PATENT APPLICATION
Assistant Commissioner for Patents
Washington, D.C. 20231

Re: Chiaki IGARASHI
RADIO TELEPHONE SYSTEM
Our Ref. Q56197

Dear Sir:

Attached hereto is the application identified above including 25 sheets of the specification, claims, 4 sheets of drawings, executed Assignment and PTO 1595 form, and executed Declaration and Power of Attorney. Also enclosed is the Information Disclosure Statement with form PTO-1449 and references.

The Government filing fee is calculated as follows:

Total claims	11 - 20	=		x	\$18.00	=	\$0.00
Independent claims	4 - 3	=	1	x	\$78.00	=	\$78.00
Base Fee							\$760.00
Multiple Dependent Claim Fee							\$260.00
TOTAL FILING FEE							\$1098.00
Recordation of Assignment							\$40.00
TOTAL FEE							\$1138.00

Checks for the statutory filing fee of \$1098.00 and Assignment recordation fee of \$40.00 are attached. You are also directed and authorized to charge or credit any difference or overpayment to Deposit Account No. 19-4880. The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 and any petitions for extension of time under 37 C.F.R. § 1.136 which may be required during the entire pendency of the application to Deposit Account No. 19-4880. A duplicate copy of this transmittal letter is attached.

Priority is claimed from October 12, 1998 based on Japanese Application No. 288961/1998. The priority document is enclosed herewith.

Respectfully submitted,
SUGHRUE, MION, ZINN,
MACPEAK & SEAS, PLLC
Attorneys for Applicant

By: File
J. Frank Osha
Registration No. 24, 625

09/14/15205

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Chiaki IGARASHI

Appln. No.:

Group Art Unit:

Filed: October 12, 1999

Examiner:

For: RADIO TELEPHONE SYSTEM

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination, kindly amend the above-identified application as follows:

IN THE SPECIFICATION:

Pages 8, 15 and 22, lines 5, 14 and 20 delete "hooked off" and insert "--hooked on--" respectively.

REMARKS

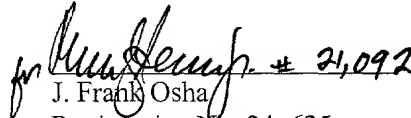
The above amendments were made to correct clerical errors in the specification.

Entry and consideration of the above amendment prior to examination are respectfully requested.

Respectfully submitted,

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RADIO TELEPHONE SYSTEM

BACKGROUND OF THE INVENTION

5 The present invention relates to radio telephone systems such as cordless telephones which performs communication with the opposite side through connection a public telephone line or network by radio communication between a slave telephone set and its master telephone set.

10 In the radio communication system, communication with its master telephone set is performed through the connection of the slave telephone set to the public telephone network for communication with the opposite side by the radio communication. Radio communication systems include analog ones such as cordless telephone sets utilizing analog radio communication and digital ones such as PHSs (personal handy phone systems).

15 In the PHS, it is possible to use the same slave telephone set (terminal) for communication both indoors (i.e., in home or in office) and outdoors. Indoors, the slave telephone set can be connected to the public telephone network by its master telephone set. Outdoors, it can be connected to the public telephone network via a base station installed by a dealer. In the PHS, it is also possible that slave telephone sets can be used for communication between them just like transceivers without agency of any base station.

25 It is prescribed as standards to register ID codes for identifying units in both the master and slave

telephone sets in the radio communication system. In the manufacture of the master and slave telephone sets, unit IDs are each registered in each of the master and slave units. Unit IDs preliminarily registered in slave units
5 are registered in master units by registering operation, and unit IDs preliminarily registered in the master telephone sets are registered in the slave units by like operation. Unless unit IDs are identical, it is impossible to start radio communication.

10 The mutual recognition of the units of the master and slave telephone sets with unit IDs, is performed in order to prevent erroneous line connection between master and slave telephone sets of different users, such as an erroneous call to the own telephone set instead
15 of a set in the next-door house or to the next-door house set instead of the own set.

In the radio communication system, a plurality of slave telephone sets can make radio communication to a single master telephone set. The master telephone set
20 with registered unit IDs of a plurality of slave telephone sets, can discriminate each slave telephone set with the unit ID thereof, thus controlling the radio communication from each slave unit.

An operational example of radio communication
25 using a channel between a master telephone set and a slave telephone set in a prior art radio telephone system will now be described. Fig. 3 is a view showing a control sequence in the prior art radio telephone system. The

master and slave telephone sets in the radio telephone system are waiting with an out-of-use control channel found at hand for use at any time.

When the slave telephone set intends to make (or
5 transmit) a telephone call to an opposite side, it transmits a line connection request on the control channel to the master telephone set. At this time, the slave telephone set also transmits its own unit ID in order that the two units are paired.

10 When the master slave receives the line connection request and the unit ID, it checks whether the receives unit ID is of its own slave telephone set. If the two unit IDs are identical, the master telephone set finds a vacant communication channel, and assigns the found
15 vacant communication channel n to the slave telephone set.

When the communication channel n is assigned, the slave telephone set checks that the channel n is vacant. If it is O.K., the slave telephone set transmits a
20 confirmation signal. When the master telephone set receives the confirmation signal from the slave telephone set, it executes an operation of line connection to the public telephone network (i.e., a switch). When the line connection is completed, the
25 master telephone set connects the line to the slave telephone set via the communication channel n.

Subsequently, like the operation in the ordinary telephone set, the telephone number of the opposite side

is dialed, and the communication is started. When on-hook is performed on the slave telephone set side, a communication "off" request is transmitted from the slave telephone set to the master telephone set. In response to receipt of the communication "off" request, the master telephone set transmits a communication "off" signal to the slave telephone set, thus ending the communication. Then, both the master and slave telephone sets restore their stand-by state again.

As described above, in the prior art radio telephone system the master telephone set assigns a communication channel to the slave telephone set for the radio communication by recognizing the slave telephone set based on a unit ID, which is one-to-one correspondence to one slave telephone set. That is, the radio communication of the slave telephone set is controlled with the unit ID in one-to-one correspondence to one slave telephone set. In other words, it is contemplated only to assign a single communication channel to one slave telephone set for the radio communication, and it is not considered to assign two or more channels for the radio communication.

If it is intended to assign two or more communication channels for communication to one standard slave telephone set, for which only a single unit ID is preliminarily registered as noted above, the master telephone set has to control radio communication with its own control system in addition to the radio

communication control with the unit ID since the master telephone set can not control a plurality of communication channels by one unit ID. This posed a problem that the unit construction of the radio communication system (or master telephone set) is complicated and the slave unit control operation becomes more cumbersome.

Moreover, in the prior art radio communication system, in case when a plurality of slave stations simultaneously start communication with one master telephone set by using two or more communication channels, the traffic (i.e., line utilization status) is extremely increased because usually at most three or four channels are provided as radio lines. This leads to a problem of readier generation of a status, in which radio communication between the master telephone set and a slave telephone set is difficult.

SUMMARY OF THE INVENTION

The present invention was made in order to solve the above problems, and its object is to provide a radio telephone system, in which one slave telephone set can simultaneously use two or more channels for radio communication.

Another object of the present invention is to provide a radio telephone system capable of reducing the traffic in the master telephone set even when a plurality of slave telephone sets start communication by using two or more communication channels.

According to an aspect of the present invention,
there is provided a radio telephone system, in which a
plurality of slave telephone sets is connected to a public
telephone network through radio communication with a
5 master telephone set, wherein: a plurality of unit IDs
are preliminarily registered in each of the slave
telephone sets, and the plurality of unit IDs are also
registered in the master telephone set.

According to another aspect of the present
10 invention, there is provided a radio telephone system,
in which a plurality of slave telephone sets is connected
to a public telephone network through radio
communication with a master telephone set, wherein: a
plurality of unit IDs are preliminarily registered in
15 each of the slave telephone sets, and the plurality of
unit IDs are also registered in the master telephone set
and whenever each slave telephone set makes radio
communication with the master telephone set, an unit ID
corresponding to the radio communication is selected.

20 The plurality of unit IDs registered in each slave
telephone set are registered in a plurality of master
telephone sets.

Each slave telephone set is capable of utilizing
both analog radio communication and also digital
25 communication.

According to other aspect of the present invention,
there is provided a radio telephone system, in which a
plurality of slave telephone sets is connected to a public

telephone network through radio communication with a master telephone set and a plurality of unit IDs are preliminarily registered in each of the slave telephone sets, and the plurality of unit IDs are also registered

5 in the master telephone set, the system including steps of: in response to hooked off of a first telephone set connected to the slave telephone set to make a telephone call to the opposite side, transmitting a line connection request signal and selected unit ID among the

10 preliminarily registered unit IDs on a control channel to the master telephone set; in response to receipt of the line connection request and the unit ID, checking whether the received unit ID is of its own slave telephone set by the master telephone set; if the unit IDS is

15 identical, finding a vacant communication channel and assigning this vacant communication channel to the slave telephone set; in response to the assignment of communication channel, checking whether that communication channel is vacant and, if it is vacant,

20 transmitting a confirmation signal by the slave telephone set; and in response to receipt of the confirmation signal from the slave unit, executing operation of line connection to the public telephone network by the master telephone set;

25 When a second telephone set is hooked off to make a telephone call to the opposite side while the first telephone set is in communication, a line connection request and the unit ID are transmitted on the control

channel to the unit ID; and the line connection like for the first telephone set is executed to obtain connection between the second telephone set and the public telephone network line.

5 When the second telephone set is hooked off to discontinue its communication in the state that both the first and second telephone sets are in communication, a communication "off" request is transmitted from the second telephone set to the master telephone set; and
10 in response to receipt of the communication "off" signal, the master telephone set transmits a communication "off" signal to the second telephone set, thus ending the communication and restore the second telephone set to the stand-by state.

15 When the first telephone set is hooked on, a communication "off" request is transmitted from the first telephone set to the master telephone set; and in response to receipt of the communication "off" request, the master telephone set transmits a communication "off"
20 signal to the first telephone set, thus ending the communication and restore the telephone set to the stand-by state.

 According to further aspect of the present invention, there is provided a radio telephone system,
25 in which a plurality of slave telephone sets is connected to a public telephone network through radio communication with a master telephone set and a plurality of unit IDs are preliminarily registered in each of the

slave telephone sets, and the plurality of unit IDs are also registered in a plurality of master telephone set, the system including steps of: responsive to arrival of a telephone call, informing the call arrival to the slave
5 telephone set and transmitting its unit ID by the master telephone set; checking whether the two unit IDs are identical and selecting one of the plurality of unit IDs registered if they are identical and transmitting the selected unit ID to the master telephone set by the slave
10 telephone set; finding a vacant communication channel for communication and informing the found communication channel to the slave telephone set by the master telephone set; checking whether the received communication channel is vacant and if it is vacant, transmitting a confirmation
15 signal by the slave telephone set; and sending out via the communication channel an instruction to ring the bell to the slave telephone set when state ready for communication is brought about.

The master telephone set sends out via the
20 communication channel an instruction to ring the bell to the slave telephone set.

Other objects and features will be clarified from the following description with reference to attached drawings.

25 BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a block diagram showing the construction of a slave telephone set of the radio telephone system embodying the present invention;

Fig. 2 is a block diagram showing the construction of a master telephone set of the radio telephone system;

Fig. 3 is a view showing a control sequence in the radio telephone system in this embodiment; and

5 Fig. 4 is a view showing a control sequence in the prior art radio telephone system.

PREFERRED EMBODIMENTS OF THE INVENTION

Preferred embodiments of the present invention will now be described with reference to the drawings.

10 Fig. 1 is a block diagram showing the construction of a radio telephone system embodying the present invention. Referring to the Figure, a radio unit 1 has a function of transmitting and receiving data to and from a radio line used for radio communication with the master
15 telephone set. A radio control unit 2 has a modulating function providing data to be transmitted to the radio line, a demodulating function of taking out or extracting the data from the radio line and a ratio control function of controlling the operation of the radio unit 1.

20 A communication channel control unit 3 has a unit ID selecting function of flexibly selecting, whenever the radio communication is performed, the unit ID corresponding to the radio communication among a plurality of unit IDs preliminarily registered in an ID
25 register unit 5. A total control unit 4 controls whole radio communication controls of all slave units. In the ID register unit 5, a plurality of unit IDs preliminarily registered at the time of the manufacture of the save

unit are registered. The unit ID of the master telephone set is also registered in the ID register unit 5 by the registering operation.

Although not shown in Fig. 1, a plurality of
5 telephone sets for making communication are connected to the slave telephone set. The number of the telephone sets may be equal to or different from the number of unit IDs registered in the ID register unit 5 of the slave unit.

10 In the slave telephone set in this embodiment, unlike the standard slave unit in the prior art described above, a plurality of unit IDs can be preliminarily registered, and the communication channel control unit
15 3 can flexibly select a unit ID corresponding to the radio communication.

As described above, in the standard slave telephone set only a single unit ID is registered in one slave unit, and only a single communication channel is assigned to one slave unit for communication from the necessity of
20 providing one-to-one correspondence between the communication channel and the unit ID. In the slave unit in this embodiment, a plurality of unit IDs are preliminarily registered, and two or more communication channels can be simultaneously assigned for radio
25 communication.

In addition, in the slave telephone set in this embodiment, when radio communication is made, the communication channel control unit 3 can flexibly select

a unit ID corresponding to the radio communication. Thus, when the radio communication is performed by using two or more communication channels, it is possible to deal with (or control) the radio communication via the individual communication channels independently of the slave telephone sets. It is thus possible to have radio communication using two or more communication channels be connected to separate or different master telephone sets.

10 The master telephone set has the similar construction as the standard master telephone set. Referring to Fig. 2, the master telephone set includes a radio unit 11, a radio control unit 12, communication channel control unit 13, a total control unit 4, an ID register unit 5 and a line control unit 16. The radio unit 11 has a function of transmitting and receiving data to and from a radio line used for radio communication with the slave telephone set. The radio control unit 12 has a modulating function providing data to be transmitted to the radio line, a demodulating function of taking out or extracting the data from the radio line and a ratio control function of controlling the operation of the radio unit 11. The communication channel control unit 13 has a unit ID selecting function of flexibly selecting, whenever the radio communication is performed, the unit ID corresponding to the radio communication among a plurality of unit IDs preliminarily registered in an ID register unit 15. The total control unit 14

controls the radio communication control and line communication control. In the ID register unit 15, a plurality of unit IDs preliminarily registered at the time of the manufacture of the save unit are registered.

5 The unit ID of the master telephone set is also registered in the ID register unit 5 by the registering operation. The line control unit 16 controls the public telephone network.

In the master telephone set, a plurality of unit
10 IDs preliminarily registered in the ID register unit 5 of the slave telephone set are registered.

The operation of the embodiment will now be described. Fig. 2 is a view showing a control sequence in the radio telephone system in this embodiment. In the
15 radio telephone system to be described with reference to Fig. 2, two unit IDs (XX, YY) are registered in the slave unit at the time of the manufacture. The IDs (XX, YY) of the slave telephone set are also registered in the master telephone set by a registering operation. Two
20 telephone sets A and B are connected to the slave telephone set.

When the master and slave telephone sets are not in communication, they are in a stand-by state. When the telephone set A connected to the slave unit is hooked
25 off to make (or transmit) a telephone call to the opposite side, a line connection request is transmitted on the control channel to the mater set. At this time, a unit ID (XX) which is flexibly selected by the communication

channel control unit 3 among the unit IDs (XX, YY)
registered in the ID register portion 5, is also
transmitted.

In response to receipt of the line connection
5 request and the unit ID (XX), the master telephone set
checks whether the received unit ID (XX) is of its own
slave unit. At this time, the master telephone set need
only check whether the unit ID (XX) is of its own slave
telephone set, and does not need to check which telephone
10 set of that slave telephone set is in use. If the two
unit IDs are identical, it can be judged that the line
connection request is of its own slave telephone set and
not of erroneous connection. When the master telephone
set determines that the unit IDS (XX) is identical, it
15 finds a vacant communication channel, and assigns this
vacant communication channel a to the slave unit.

In response to assignment of the communication
channel a, the slave unit checks whether that
communication channel is vacant and, if it is O.K., it
20 transmits a confirmation signal. When the master
telephone set receives a confirmation signal from the
slave unit, it executes an operation of line connection
to the public telephone network (or switch). When the
line connection is completed, the telephone set A of the
25 slave telephone set is connected to the public telephone
network like via the communication channel a. When the
telephone set A of the slave telephone set and the public
telephone network line are connected to each other, like

the operation with the ordinary telephone set, the opposite side telephone number is dialed to start communication.

When the telephone set B is hooked off to make (or
5 transmit) a telephone call to the opposite side while the telephone set A is in communication, a line connection request and the unit ID (XX) are transmitted on the control channel to the unit ID (YY). Subsequently, an operation like the operation until the completion of the
10 line connection of the telephone set A is executed to obtain connection between the telephone set B and the public telephone network line. Now, the telephone set B is entitled to start communication.

When the telephone set B is hooked off to
15 discontinue its communication in the state that both the telephone sets A and B are in communication, a communication "off" request is transmitted from the telephone set B to the master telephone set. In response to receipt of the communication "off" signal, the master
20 telephone set transmits a communication "off" signal to the telephone set B, thus ending the communication. The telephone set B is then restored to the stand-by state.

When the telephone set A is hooked on, a communication "off" request is also transmitted from the
25 telephone set A to the master telephone set. In response to receipt of the communication "off" request, the master telephone set transmits a communication "off" signal to the telephone set A, thus ending the communication. The

telephone set is then restored to the stand-by state.

By registering a plurality of IDs that are registered in each slave telephone set also in each of a plurality of master telephone sets, it is possible to
5 let each slave telephone set make radio communication with a plurality of master telephone sets. For example, it is possible to make radio communication using the unit ID (XX) with a master telephone set and also make radio communication using the unit ID (YY) with a different
10 master telephone set. Thus, the maximum number of radio lines possessed by the master telephone set can be used efficiently, thus reducing the traffic therein.

Responsive to arrival of a telephone call, the master telephone set informs the call arrival to the slave
15 telephone set and also transmits its unit ID thereto. The slave telephone set checks whether the two unit IDs are identical. If it is O.K., the slave telephone set selects one of the plurality of unit IDs registered therein, and transmits the selected unit ID to the master
20 telephone set. The master telephone set finds a vacant communication channel for communication, and informs the found communication channel to the slave telephone set. The slave telephone set checks whether the received communication channel is vacant. If it is O.K., the
25 slave unit transmits a confirmation signal. When state ready for communication is brought about, the master telephone set sends out via the communication channel an instruction to ring the bell to the slave telephone

set.

The slave telephone set may be set such that the bell of all or particular one or ones of the telephone sets connected to it is rang. The slave telephone set may be provided with a function of selecting a telephone set for ringing the bell. It is further possible to make use of dial-in or global call arrival by concluding a contract with a communication business dealer in advance.

As has been shown, in this embodiment, as set forth in claim 1, a plurality of unit IDs are preliminarily registered in the slave telephone set, and two or more communication channels can be assigned at a time to the slave telephone set for radio communication.

In addition, whenever radio communication is intended, the communication channel control unit 3 can flexibly select a unit ID corresponding to that radio communication. Thus, when two or more communication channels are used for communication, the radio communication on these communication channels can be dealt with (or controlled) independently of the slave telephone set. Thus, the master telephone set may be of the standard structure, no independent radio communication control system need be provided, and it is not possible to lead to complications of the unit construction of the master telephone set or cumbersomeness of the slave telephone set control operation.

Furthermore, since radio communication is controlled not for each save set but for each radio communication (or communication channel) with unit IDs, by adapting each slave telephone set to be able to utilize
5 both analog radio communication and digital radio communication, it is possible to permit selective use of the analog radio communication and the digital radio communication for each radio communication.

As has been described in the foregoing, according
10 to the present invention, a plurality of unit IDs are preliminarily registered in each slave unit, and the unit IDs registered in each slave telephone set are also registered in the master telephone set. Thus, it is possible to assign two or more communication channels
15 at a time for communication.

According to the present invention, whenever each slave telephone set makes radio communication with the master telephone set, it flexibly selects the unit ID corresponding to that radio communication. The radio
20 communication thus can be controlled independently of the slave telephone set. Thus, the master telephone set may be the standard structure, no independent radio communication control system need be provided, and it is not possible to lead to complications of the unit
25 construction of the master telephone set or cumbersomeness of the slave telephone set control operation.

In the radio communication system according to the

present invention, a plurality of IDs registered in each slave telephone set are also registered in each of a plurality of master telephone sets. Each slave telephone set thus can make radio communication with a plurality of mater sets. Thus, the maximum number of radio lines possessed by the master telephone set can be used efficiently, thus reducing the traffic therein.

In the radio communication system according to the present invention, each slave telephone set can be utilized for both analog radio communication and digital radio communication. It is thus possible to selectively use the analog radio communication and the digital radio communication for the radio communication.

Changes in construction will occur to those skilled in the art and various apparently different modifications and embodiments may be made without departing from the scope of the present invention. The matter set forth in the foregoing description and accompanying drawings is offered by way of illustration only. It is therefore intended that the foregoing description be regarded as illustrative rather than limiting.

What is claimed is:

1. A radio telephone system, in which a plurality of slave telephone sets is connected to a public telephone network through radio communication with a master telephone set, wherein:

a plurality of unit IDs are preliminarily registered in each of the slave telephone sets, and the plurality of unit IDs are also registered in the master telephone set.

2. A radio telephone system, in which a plurality of slave telephone sets is connected to a public telephone network through radio communication with a master telephone set, wherein:

a plurality of unit IDs are preliminarily registered in each of the slave telephone sets, and the plurality of unit IDs are also registered in the master telephone set and whenever each slave telephone set makes radio communication with the master telephone set, an unit ID corresponding to the radio communication is selected.

3. The radio communication system according to claim 1 or 2, wherein the plurality of unit IDs registered in each slave telephone set are registered in a plurality of master telephone sets.

4. The radio telephone system according to claim 1 or 2, wherein each slave telephone set is capable of utilizing both analog radio communication and also digital

communication.

5. The radio communication system according to claim 1 or 2, wherein the plurality of unit IDs registered in each slave telephone set are registered in a plurality of master telephone sets and each slave telephone set is capable of utilizing both analog radio communication and also digital communication.

6. A radio telephone system, in which a plurality of slave telephone sets is connected to a public telephone network through radio communication with a master telephone set and a plurality of unit IDs are preliminarily registered in each of the slave telephone sets, and the plurality of unit IDs are also registered in the master telephone set, the system including steps of:

in response to hooked off of a first telephone set connected to the slave telephone set to make a telephone call to the opposite side, transmitting a line connection request signal and selected unit ID among the preliminarily registered unit IDs on a control channel to the master telephone set;

in response to receipt of the line connection request and the unit ID, checking whether the received unit ID is of its own slave telephone set by the master telephone set;

if the unit IDS is identical, finding a vacant communication channel and assigning this vacant

communication channel to the slave telephone set;

in response to the assignment of communication channel, checking whether that communication channel is vacant and, if it is vacant, transmitting a confirmation signal by the slave telephone set; and

in response to receipt of the confirmation signal from the slave unit, executing operation of line connection to the public telephone network by the master telephone set;

7. The radio telephone system according to claim 6, wherein when a second telephone set is hooked off to make a telephone call to the opposite side while the first telephone set is in communication, a line connection request and the unit ID are transmitted on the control channel to the unit ID; and the line connection like for the first telephone set is executed to obtain connection between the second telephone set and the public telephone network line.

8. The radio telephone system according to claim 6, wherein when the second telephone set is hooked off to discontinue its communication in the state that both the first and second telephone sets are in communication, a communication "off" request is transmitted from the second telephone set to the master telephone set; and

in response to receipt of the communication "off" signal, the master telephone set transmits a communication

"off" signal to the second telephone set, thus ending the communication and restore the second telephone set to the stand-by state.

9. The radio telephone system according to claim 6, wherein when the first telephone set is hooked on, a communication "off" request is transmitted from the first telephone set to the master telephone set; and

in response to receipt of the communication "off" request, the master telephone set transmits a communication "off" signal to the first telephone set, thus ending the communication and restore the telephone set to the stand-by state.

10. A radio telephone system, in which a plurality of slave telephone sets is connected to a public telephone network through radio communication with a master telephone set and a plurality of unit IDs are preliminarily registered in each of the slave telephone sets, and the plurality of unit IDs are also registered in a plurality of master telephone set, the system including steps of:

responsive to arrival of a telephone call, informing the call arrival to the slave telephone set and transmitting its unit ID by the master telephone set;

checking whether the two unit IDs are identical and selecting one of the plurality of unit IDs registered if they are identical and transmitting the selected unit ID to the master telephone set by the slave telephone set;

finding a vacant communication channel for communication and informing the found communication channel to the slave telephone set by the master telephone set;

checking whether the received communication channel is vacant and if it is vacant, transmitting a confirmation signal by the slave telephone set; and

sending out via the communication channel an instruction to ring the bell to the slave telephone set when state ready for communication is brought about.

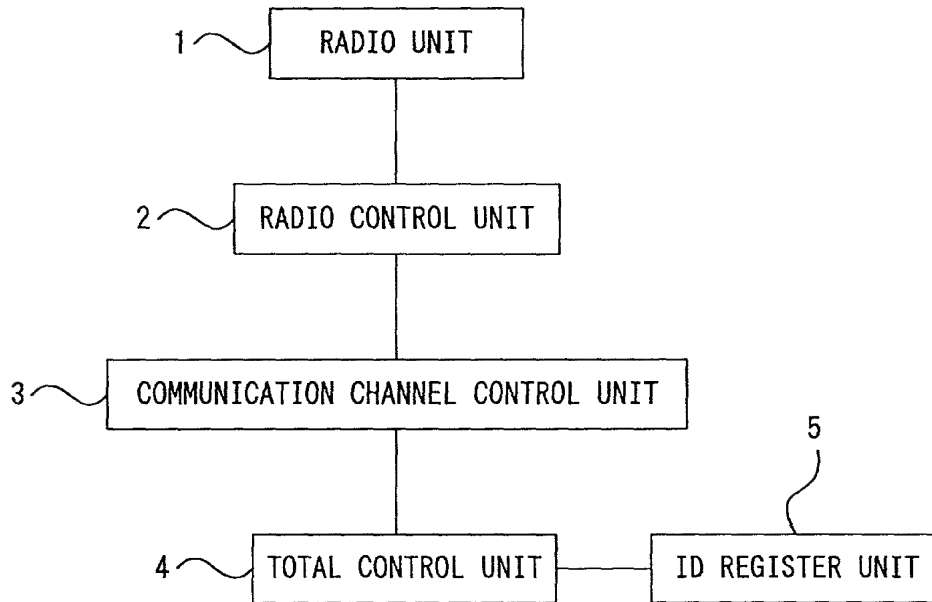
11. The radio telephone system according to claim 10, wherein the master telephone set sends out via the communication channel an instruction to ring the bell to the slave telephone set.

ABSTRACT OF THE DISCLOSURE

In the radio communication control of the slave telephone set with a unit ID in one-to-one correspondence to one slave telephone set, in order to assign two or
5 more communication channels to one slave telephone set for radio communication, a plurality of unit IDs are registered in each slave telephone set are also registered in the master telephone set.

288961/1998

FIG.1



662107 50257460

FIG.2

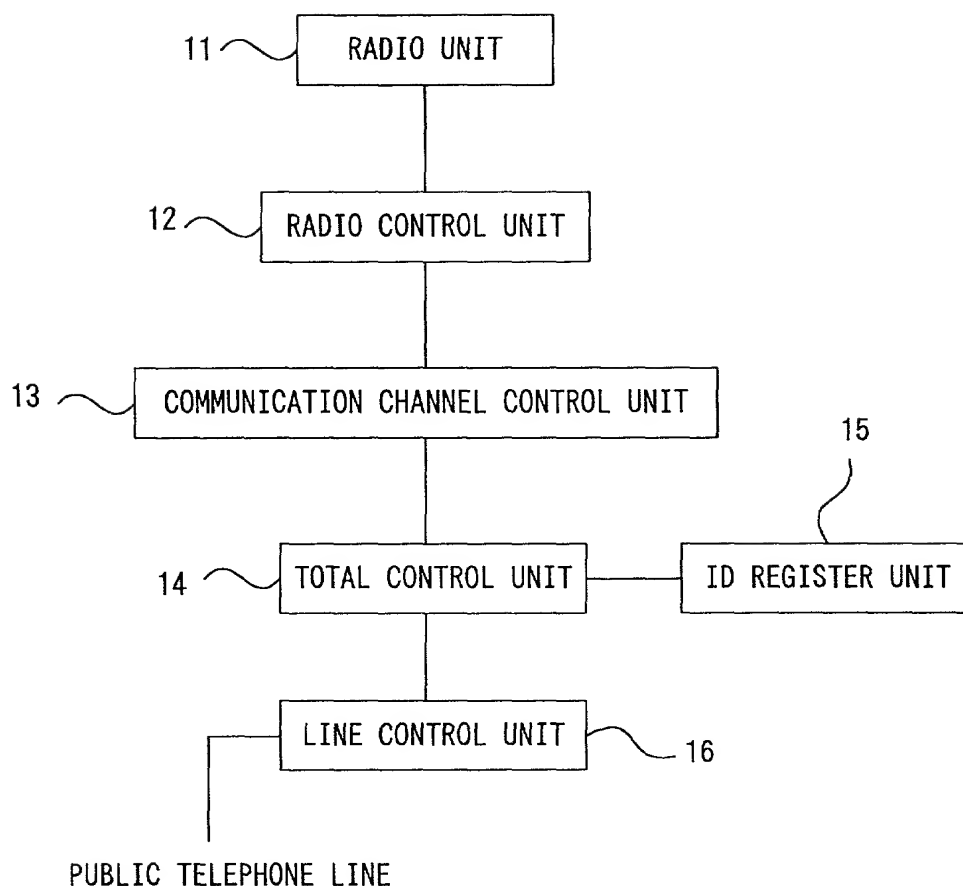


FIG.3

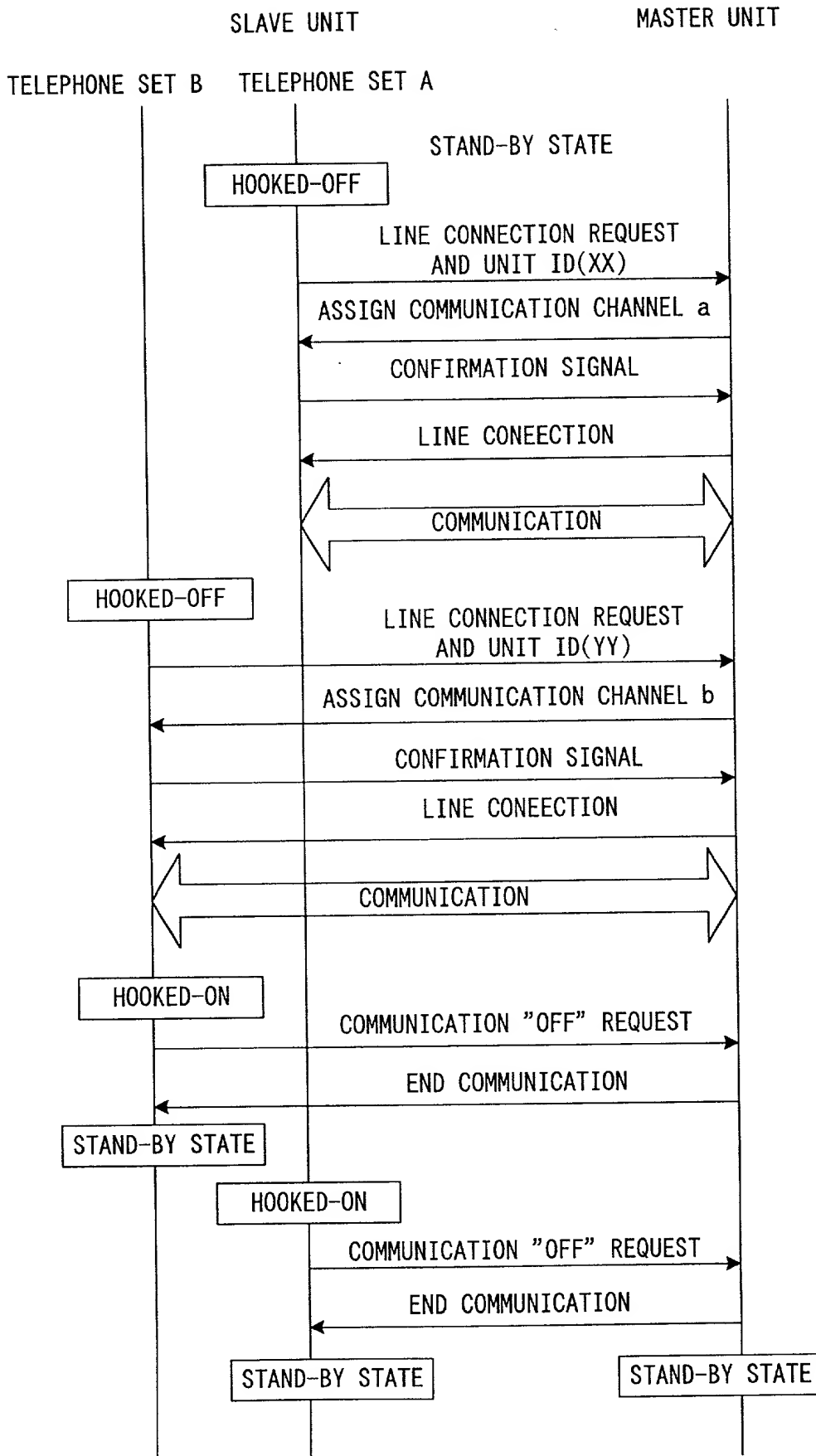
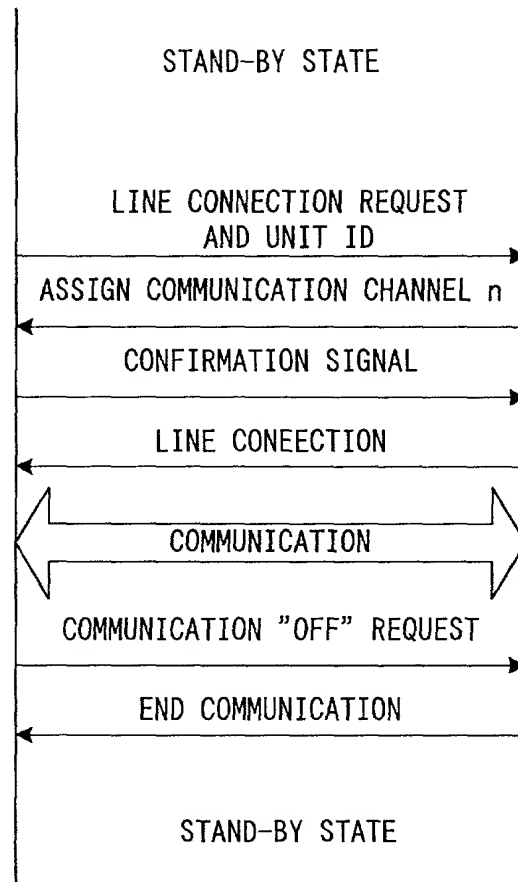


FIG.4

SLAVE UNIT

MASTER UNIT



09445205 101299

Declaration and Power of Attorney for Patent Application

特許出願宣言書

Japanese Language Declaration

私は、下欄に氏名を記載した発明として、以下の通り宣言する。

私の住所、郵便の宛先および国籍は、下欄に氏名に続いて記載したとおりであり、

名称の発明に関し、請求の範囲に記載した特許を求める主題の本来の、最初にして唯一の発明者である（一人の氏名のみが下欄に記載されている場合）か、もしくは本来の、最初にして共同の発明者である（複数の氏名が下欄に記載されている場合）と信じ、

As a below named inventor, I hereby declare that

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

RADIO TELEPHONE SYSTEM

その明細書を
(該当するほうに印を付す)

☐ ここに添付する。

☐ _____ 日に出願番号

第 _____ 号として提出し、

_____ 日に補正した。
(該当する場合)

the specification of which
(check one)

☒ is attached hereto.

☐ was filed on _____ as

Application Serial No. _____

and was amended on _____
(if applicable)

私は、前記のとおり補正した請求の範囲を含む前記明細書の内容を検討し、理解したことを陳述する。

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above

私は、連邦規則法典第37部第1章第56条(a)項に従い、本願の審査に所要の情報を開示すべき義務を有することを認める。

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

Japanese Language Declaration

私は、合衆国法典第35部第119条、第172条、又は第365条に基づく下記の外国特許出願又は発明者証出願の外国優先権利益を主張し、さらに優先権の主張に係わる基礎出願の出願日前の出願日を有する外国特許出願又は発明者証出願を以下に明記する：

Prior foreign applications

先の外国出願

288961/1998
(Number)
(番号)

JAPAN
(Country)
(国名)

12/10/1998
(Day/Month/Year Filed)
(出願の年月日)

(Number)
(番号)

(Country)
(国名)

(Day/Month/Year Filed)
(出願の年月日)

(Number)
(番号)

(Country)
(国名)

(Day/Month/Year Filed)
(出願の年月日)

(Number)
(番号)

(Country)
(国名)

(Day/Month/Year Filed)
(出願の年月日)

(Number)
(番号)

(Country)
(国名)

(Day/Month/Year Filed)
(出願の年月日)

Priority claimed

優先権の主張

☒

Yes
あり

☐

No
なし

☐

Yes
あり

☐

No
なし

☐

Yes
あり

☐

No
なし

☐

Yes
あり

☐

No
なし

☐

Yes
あり

☐

No
なし

私は、合衆国法典第35部第120条に基づく下記の合衆国特許出願の利益を主張し、本願の請求の範囲各項に記載の主題が合衆国法典第35部第112条第1項に規定の態様で先の合衆国出願に開示されていない限度において、先の出願の出願日と本願の国内出願日又はPCT国際出願日の間に公表された連邦規則法典第37部第1章第56条(a)項に記載の所要の情報を開示すべき義務を有することを認める。

I hereby claim the benefit of Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose any material information as defined in Title 37, Code of Federal Regulations, §156(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application

(Application Serial No.)
(出願番号)

(Filing Date)
(出願日)

(現況)
特許済み、係属中、放棄済み

(Status)
(patented, pending abandoned)

(Application Serial No.)
(出願番号)

(Filing Date)
(出願日)

(現況)
特許済み、係属中、放棄済み

(Status)
(patented, pending abandoned)

私は、ここに自己の知識に基づいて行った陳述がすべて真実であり、自己の有する情報及び信ずるところに従って行った陳述が真実であると信じ、更に故意に虚偽の陳述等を行った場合、合衆国法典第18部第1001条により、罰金もしくは禁固に処せられるか、又はこれらの刑が併科され、又はかかる故意による虚偽の陳述が本願ないし本願に対して付与される特許の有効性を損なうことがあることを認識して、以上の陳述を行ったことを宣言する。

I hereby declare that all statements made herein of my own knowledge are true; and further that all statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Japanese Language Declaration

委任状 私は、下記発明者として、以下の代理人をここに
 委任し、本願の手続きを遂行すること並びにこれに関する一
 切の行為を特許商標局に対して行うことを委任する。
 (代理人氏名及び登録番号を明記のこと)

POWER OF ATTORNEY As a named inventor, I hereby
 appoint the following attorney(s) and/or agent(s) to
 prosecute this application and transact all business in the
 Patent and Trademark Office connected therewith (list
 name and registration number)

I hereby appoint John H. Mion, Reg. No. 18,879; Donald E. Zinn, Reg. No. 19,046; Thomas J. Macpeak, Reg. No. 19,292;
 Robert J. Seas, Jr., Reg. No. 21,092; Darryl Mexic, Reg. No. 23,063; Robert V. Sloan, Reg. No. 22,775; Peter D. Olexy, Reg.
 No. 24,513; J. Frank Osha, Reg. No. 24,625; Waddell A. Biggart, Reg. No. 24,861; Robert G. McMorow, Reg. No. 19,093;
 Louis Gubinsky, Reg. No. 24,835; Neil B. Siegel, Reg. No. 25,200; David J. Cushing, Reg. No. 28,703; John R. Inge, Reg. No.
 26,916; Joseph J. Ruch, Jr., Reg. No. 26,577; Sheldon I. Landsman, Reg. No. 25,430; Richard C. Turner, Reg. No. 29,710;
 Howard L. Bernstein, Reg. No. 25,665; Alan J. Kasper, Reg. No. 25,426; Kenneth J. Burchfiel, Reg. No. 31,333; Gordon Kit,
 Reg. No. 30,764; Susan J. Mack, Reg. No. 30,951; Frank L. Bernstein, Reg. No. 31,484; Mark Boland, Reg. No. 32,197; William
 H. Mandir, Reg. No. 32,156; Scott M. Daniels, Reg. No. 32,562; Brian W. Hannon, Reg. No. 32,778; Abraham J. Rosner, Reg.
 No. 33,276; Bruce E. Kramer, Reg. No. 33,725; Paul F. Neils, Reg. No. 33,102; and Brett S. Sylvester, Reg. No. 32,765, my
 attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and
 request that all correspondence about the application be addressed to SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC, 2100
 Pennsylvania Avenue, N.W., Washington, D.C. 20037-3202.

書類の送付先:

Send Correspondence to:

SUGHRUE, MION, ZINN, MACPEAK & SEAS
 2100 Pennsylvania Avenue, N.W., Washington, D.C. 20037

直通電話連絡先: (名称及び電話番号)

Direct Telephone Calls to: (name and telephone number)

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唯一の又は第一の発明者の氏名	Full name of sole or first inventor CHIAKI IGARASHI
同発明者の署名 日付	Inventor's signature Date <i>Chiaki Igarashi</i>
住所	Residence Tokyo, JAPAN
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第二の共同発明者の氏名 (該当する場合)	Full name of second joint inventor, if any
同第二発明者の署名 日付	Second inventor's signature Date
住所	Residence
国籍	Citizenship
郵便の宛先	Post office address

(第三又はそれ以降の共同発明者に対しても同様な情報
 および署名を提供すること。)

(Supply similar information and signature for third and
 subsequent joint inventors.)